TEST REPORT

Report Number: 101412796MPK-003
Project Number: G101412796
November 27, 2013

Testing performed on the
MultiMode Stealth Series

Model Numbers:
900W2030, 900W2036, 900W2037, 900W2026
and 900W2027

FCC ID: 2ABR4-STEALTH
IC: 11727A-STEALTH

to
FCC Part 15 Subpart C (15.225)
Industry Canada RSS-210 Issue 8
FCC Part 15, Subpart B
Industry Canada ICES-003

For

Veridt, Inc.

Test Performed by:	Test Authorized by:
Intertek	Veridt, Inc.
1365 Adams Court	7182 US Highway 14, Suite 401
Menlo Park, CA 94025 USA	Middleton, WI 53562 USA

Prepared by: _____ **Date:** November 27, 2013
Anderson Soungpanya

Reviewed by: _____ **Date:** November 27, 2013
Krishna Vemuri

Report No. 101412796MPK-003

Equipment Under Test:	MultiMode Stealth Series
Trade Name:	Veridt, Inc.
Model Numbers:	900W2030, 900W2036, 900W2037, 900W2026 and 900W2027
Serial Numbers:	G40R130005 G40B130004 G00B130002 G403130001 G003130002
FCC ID:	2ABR4-STEALTH
IC:	11727A-STEALTH
Applicant:	Veridt, Inc.
Contact:	Martin Janiak
Address:	7182 US Highway 14, Suite 401 Middleton, WI 53562
Country	USA
Tel. Number:	(608) 833-1840
Email	mjaniak@veridt.com
Applicable Regulation:	FCC Part 15 Subpart C (15.225) Industry Canada RSS-210 Issue 8 FCC Part 15, Subpart B Industry Canada ICES-003
Test Site Location:	ITS – Site 1 1365 Adams Drive Menlo Park, CA 94025
Date of Test:	November 15 to 27, 2013

We attest to the accuracy of this report:

Anderson Soungpanya	Krishna K Vemuri
Project Engineer	EMC Senior Staff Engineer

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1.0 Summary of Tests

TEST	REFERENCE FCC 15.225	REFERENCE RSS-210	RESULTS
Field Strength of Fundamental	15.225(a)	A2.6	Complies
Radiated Emissions Outside the band	15.225(b), 15.225(c), 15.225(d), 15.209	A2.6	Complies
Frequency Tolerance of the Carrier	15.225(e)	A2.6	Complies
Line Conducted Emissions	15.207	RSS-GEN	Complies
Occupied Bandwidth	15.215	RSS-GEN	Complies
Radiated Emissions from Digital Parts	15.109	ICES-003	Complies
Conducted Emissions from Digital Parts	15.107	ICES-003	Complies
Antenna requirement	15.203	RSS-GEN	Complies[1]

[1] EUT utilizes an internal Antenna.

2.0 General Description

2.1 Product Description

The MultiMode Stealth Series (EUT) is a RFID Reader. The MultiMode Stealth Series consists of 5 transmitters.

Overview of the EUT

Applicant name & address	Veridt, Inc. 7182 US Highway 14, Suite 401 Middleton, WI 53562 USA	
Contact info / Email	Mr. Martin Janiak / mjaniak@veridt.com	
Equipment under Test (EUT)	**Models Number**	**Serial Number**
	900W2030	G40R130005
	900W2036	G40B130004
	900W2037	G00B130002
	900W2026	G403130001
	900W2027	G003130002
FCC Identifier	2ABR4-STEALTH	
IC Identifier	11727A-STEALTH	
Operating Frequency	13.56MHz	
Number of Channels	1	
Type of Modulation	ASK	
Operating Temperature	-20^{o}C to +50^{o}C	
Antenna Type	Internal PCB Antenna	

A prototype version of the EUT was received on November 15, 2013 in good operating condition. As declared by the Applicant, it is identical to production units.

2.2 Related Submittal(s) Grants

None

2.3 Test Methodology

Both AC mains line-conducted and radiated emissions measurements were performed according to the procedures in ANSI C63.4. Radiated tests were performed at an antenna to EUT distance of 10 meters, unless stated otherwise in this test report. All other measurements were made in accordance with the procedures in part 2 of CFR 47 7& ANSI 63.10.

2.4 Test Facility

The radiated emission test site and conducted measurement facility used to collect the data is 10m semi-anechoic chamber located in Menlo Park, California. This test facility and site measurement data have been fully placed on file with the FCC and Industry Canada (Site # 2042L-1).

3.0 System Test Configuration

3.1 Support Equipment and description

System Support Equipment

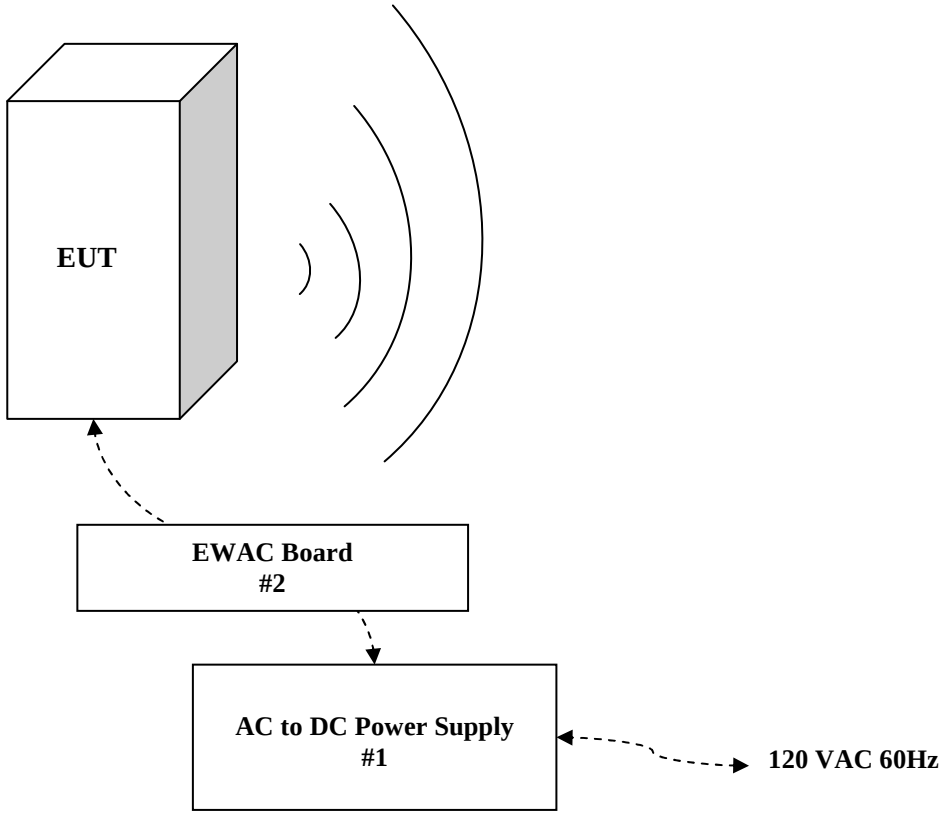
Item #	Description	Model No.	Serial No.
1	EXTECH, DC power supply	EP-3003	D30030012
2	EWAC Board	000-104702	Not Labeled

Cables Associated with EUT

Description	Length	Shielding	Ferrites	Connection	
				From	To
GUARDOG	2.5 m	No	No	EWAC Board	EUT
DC cable	1	No	No	Power Supply	EWAC Board
AC Cable	1.5	No	No	120VAC 60Hz	Power Supply

3.2 Block Diagram of Test Setup

The diagram shown below details the interconnection of the EUT and support equipment. For specific layout, refer to the test configuration photograph in the relevant section of this report.



S = Shielded **U** = Unshielded	**F** = With Ferrite **m** = Length in Meters

3.3 Justification

For emission testing, the test procedures, as described in American National Standards Institute C63.4, were employed. The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). During testing, all cables were manipulated to produce worst-case emissions.

The MultiMode Stealth Series consists of 5 different models. All models have identical RF Board (PCB layout, components, BOM) and antenna. The difference between models are: changes to plastic enclosure to incorporate different non-RF digital components such as finger print, keypad, status indicator etc. The following are the details:

MultiMode™ Stealth Series Part Number	*Stealth Bio 900W2030*	*Stealth Dual 900W2036*	*Stealth Dual Lite 900W2037*	*Stealth 900W2026*	*Stealth Lite 900W2027*
					
Biometrics	*Fingerprint*				
Card Read Interface	*Dual*	*Dual*	*Dual*	*Contactless*	*Contactless*
PIN Entry	*Keypad*	*Keypad*	*No*	*Keypad*	*No*
Status Indicators	*Yes + Access Light Bar*	*Yes + Access Light Bar*	*Access Light Bar*	*Yes + Access Light Bar*	*Access Light Bar*
High Assurance Modes	*CHUID/CAK/PKI*	*CHUID/CAK/PKI*	*CHUID/CAK*	*CHUID/CAK*	*CHUID/CAK*

Reader Authentication Modes		*Card Only*	*Card + PIN*	*Card + Bio*	*Card + PIN + Bio*	*TWIC Modes (CAK)*	*PIV Modes (CAK)*	*PIV Modes (PKI)*
Communications Interface								
Wiegand Only	*(select one mode only)*	X	X	X	X			
Wiegand + RS-485	*Control Authentication Modes Veridt Reader Service*	X	X	X	X			
Veridt / EWAC	*Control Authentication Modes Veridt reader Service*	X	X	X	X	X	X	X
HID / PAM	*Control Authentication Modes Binary Reader Service*	X	X	X	X	X	X	X

Full tests were performed only on the Stealth Bio 900W2030 & Stealth Dual 900W2036. These two samples are the fully loaded configuration of the Multimode Stealth Series. On the Stealth 900W2026, limited tests were performed; in particular, fundamental field strength emissions and AC Line Conducted Emissions. On the Stealth Dual Lite 900W2037 and Stealth Lite 900W2027, limited test was performed; in particular, fundamental field strength emissions.

Radiated Emission from Digital Parts and Receiver was performed on all 5 Multimode Stealth Series variations.

3.4 Software Exercise Program

None.

3.5 Mode of operation during test

EUT (MultiMode Stealth Series) was continuously transmitting during the tests.

3.6 Modifications required for Compliance

No modifications were installed by Intertek Testing Services during compliance testing in order to bring the product into compliance.

3.7 Additions, deviations and exclusions from standards

No additions, deviations or exclusion have been made from standard.

4.0 Measurement Results

4.1 Field Strength of Fundamental and Radiated Emissions Outside the band

4.1.1 Requirements

FCC Rules 15.225, 15.209

a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter (84 dBuV/m) at 30 meters.

b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

§15.209 Radiated emission limits; general requirements.

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

4.1.2 Procedure

Radiated Measurements Below 30 MHz

During the test the EUT is rotated and the measuring antenna angles are varied during the search for maximum signal level.

Radiated emissions are taken at ten meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance. Measurements for below 30 MHz were made at 10 meters. Data results below are corrected for distance back to 30 meters.

Radiated Measurements Above 30 MHz

During the test the EUT is rotated and the measuring antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters.

Radiated emissions are taken at ten meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance. Measurements for below above 30 MHz were made at 10 meters. Data results below are corrected for distance back to 3 meters.

Radiated emission measurements were performed from 10 MHz to 1 GHz.
Analyzer resolution is:

9 kHz or greater for 10MHz to 30 MHz
120 kHz or greater for 30MHz to 1000 MHz
For those frequencies quasi-peak detector applies

Data includes of the worst-case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation is as follows:

FS = RA + AF + CF – AG – DCF

Where FS = Field Strength in dB (μV/m)

RA = Receiver Amplitude (including preamplifier) in dB (μV)
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB (1/m)
AG = Amplifier Gain in dB
DCF = Distance Correction Factor

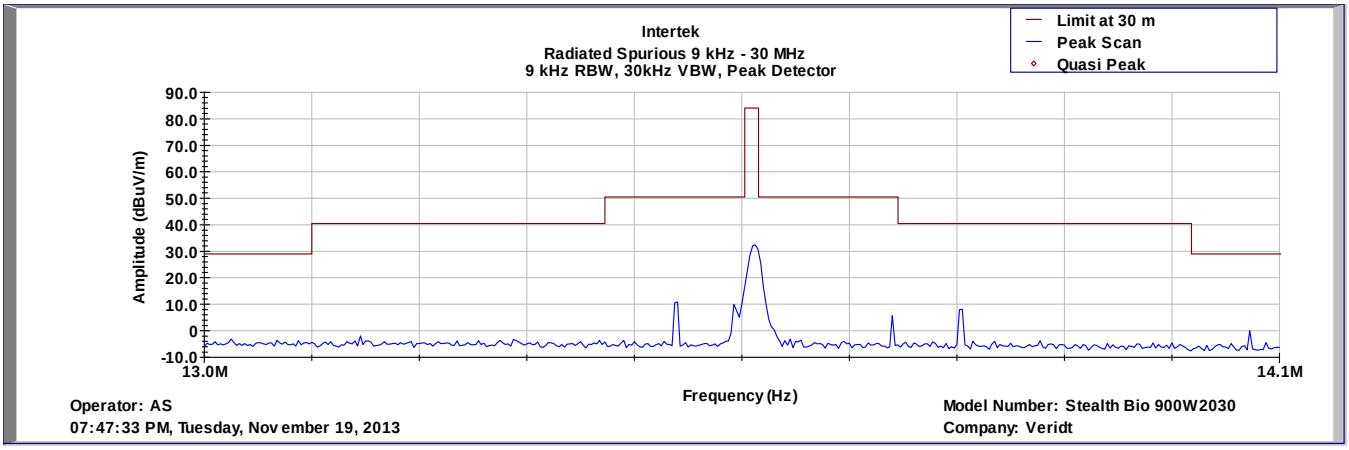
Note: FS was measured with loop antenna

4.1.3 Test Result 15.225 (a)(b)(c)

The data below shows the significant emission frequencies, the limit and the margin of compliance.

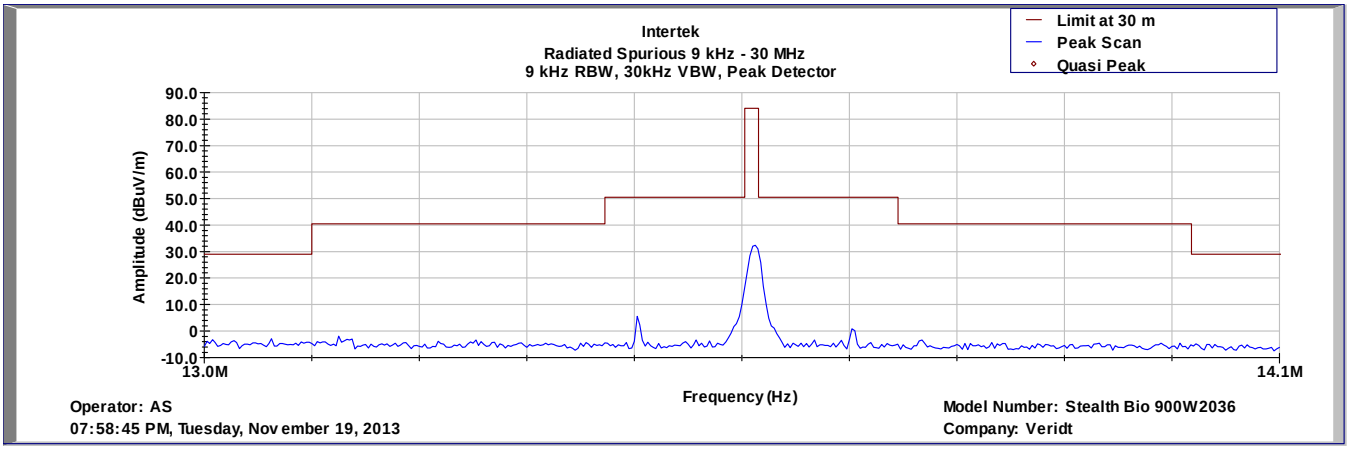
1. Radiated emissions at fundamental frequency of Stealth Bio 900W2030

Frequency	Peak FS@30m	Limit@30m	Margin	RA@10m	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
13.56	32.3	84	-51.7	48.2	0.2	32	-19.1	35



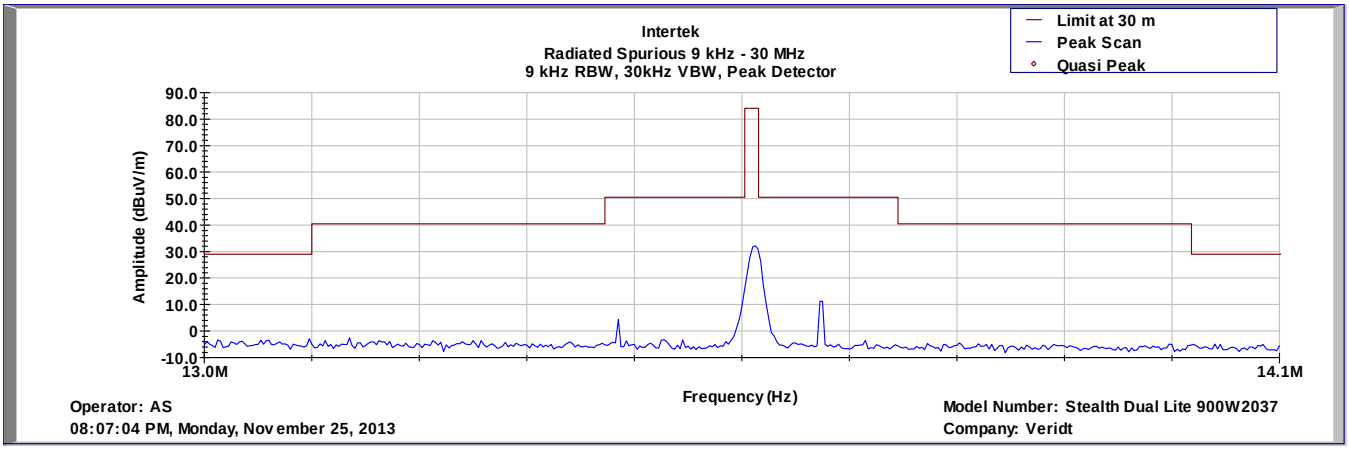
2. Radiated emissions at fundamental frequency of Stealth Dual 900W2036

Frequency	Peak FS@30m	Limit@30m	Margin	RA@10m	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
13.56	32.3	84	-51.7	48.3	0.2	32	-19.1	35



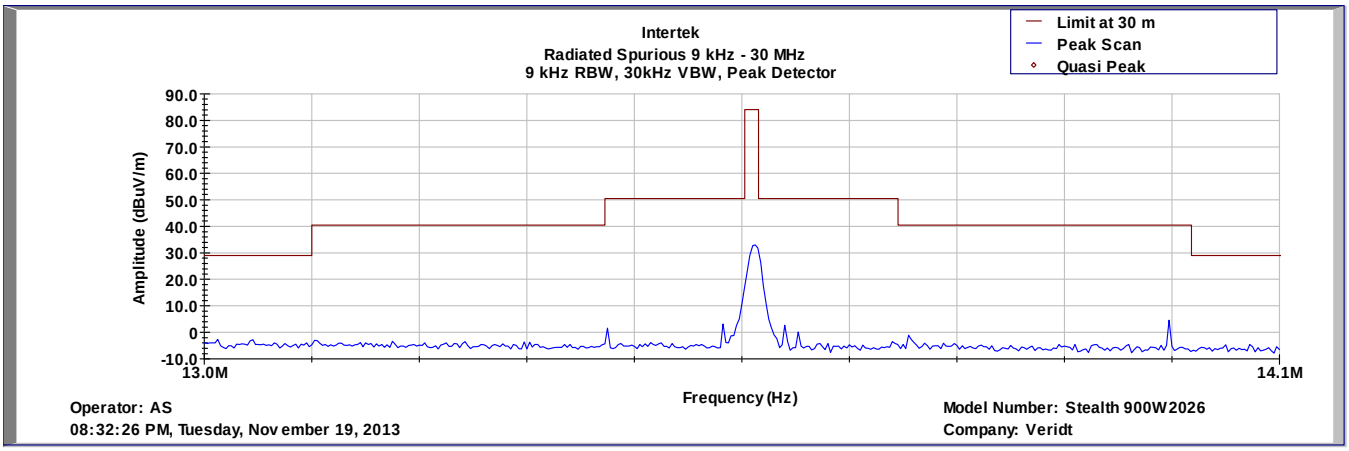
3. Radiated emissions at fundamental frequency of Stealth Dual Lite 900W2037

Frequency	Peak FS@30m	Limit@30m	Margin	RA@10m	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
13.56	32.1	84	-51.9	48.1	0.2	32	-19.1	35



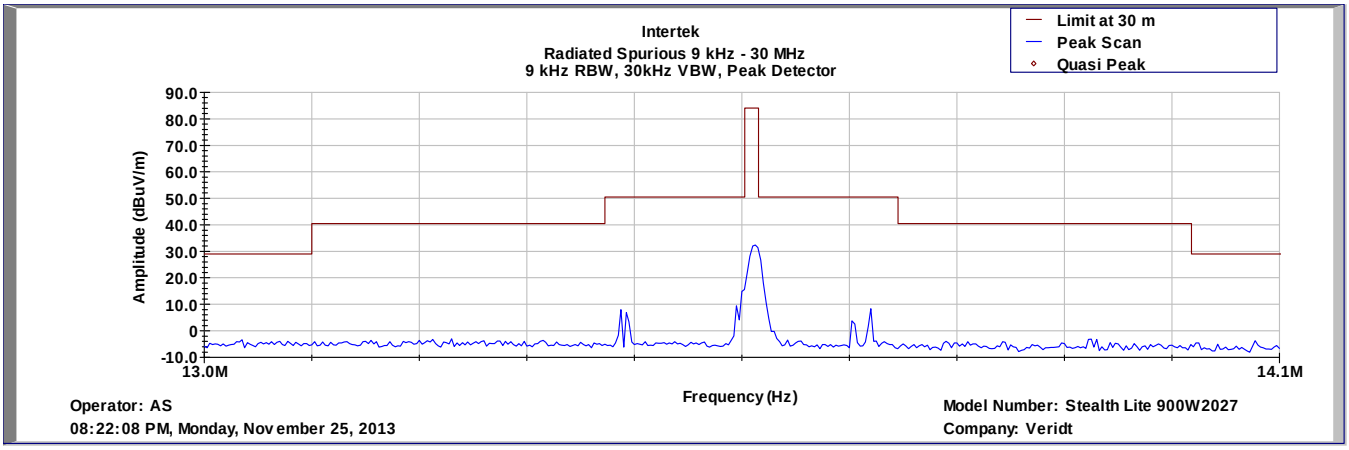
4. Radiated emissions at fundamental frequency of Stealth 900W2026

Frequency	Peak FS@30m	Limit@30m	Margin	RA@10m	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
13.56	33	84	-51	48.9	0.2	32	-19.1	35



5. Radiated emissions at fundamental frequency of Stealth Lite 900W2027

Frequency	Peak FS@30m	Limit@30m	Margin	RA@10m	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
13.56	32.4	84	-51.6	48.3	0.2	32	-19.1	35



4.1.4 Test Result 15.225 (d)

Radiated Spurious Emissions 10 MHz to 10th Harmonic of Fundamental Transmitter (135.6MHz)

Radiated Spurious Emissions of Stealth Bio 900W2030

Frequency	Quasi Pk FS@30m	Limit@30m	Margin	RA@10m	Cable	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
27.13	18.1	29	-10.9	34.4	0.2	32	-19.1	34.6
Frequency	Quasi Pk FS@3m	Limit@3m	Margin	RA@10m	Cable	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
38.50	38.3	40	-1.7	42.4	0.4	32	10.5	17.0
108.10	36.6	43.5	-6.9	47.1	0.6	32	10.5	10.4

Radiated Spurious Emissions of Stealth Dual 900W2036

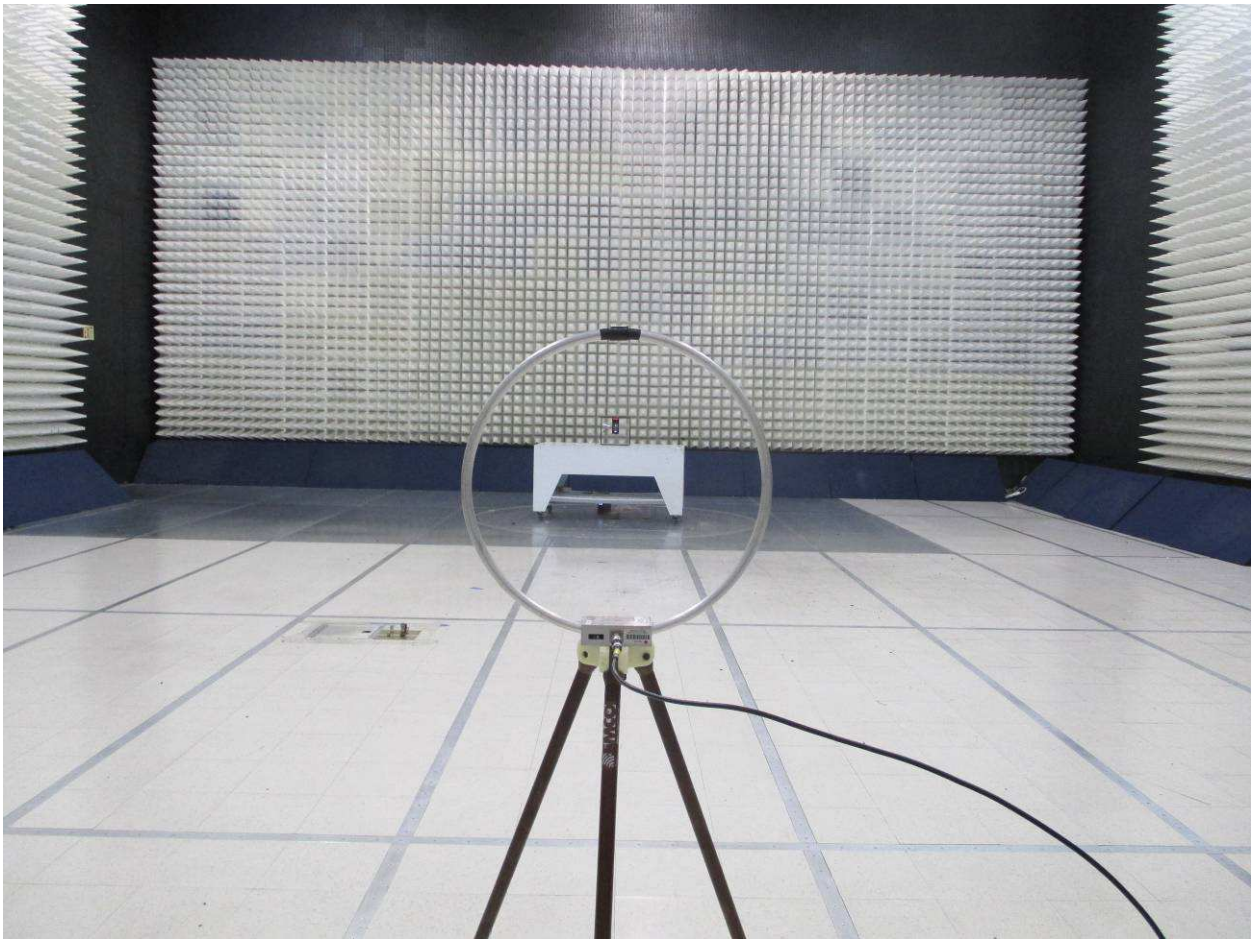
Frequency	Quasi Pk FS@30m	Limit@30m	Margin	RA@10m	Cable	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
27.13	17.6	29	-11.4	33.8	0.3	32	-19.1	34.6
Frequency	Quasi Pk FS@3m	Limit@3m	Margin	RA@10m	Cable	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
38.50	37.5	40	-2.5	41.6	0.4	32	10.5	17.0
40.60	38.8	40	-1.2	43.2	0.3	32	10.5	16.8
84.30	38.0	40	-2.0	51.6	0.5	32	10.5	7.4

Note: All other emissions not reported are noise floor which is at least 10 dB below the limit.

Result:	**Complies** by 1.2dB

4.1.5 Test Configuration Photographs

The following photographs show the testing configurations used.



4.2 Frequency Tolerance

4.2.1 Requirement

FCC 15.225 (e)

The frequency tolerance of the carrier signal shall be maintained within ±0.01% of the operating frequency over a temperature variation of −20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

4.2.2 Procedure

The EUT was placed in the temperature chamber. The transmitter was powered from a DC power supply 12V. The frequency counter was connected to the transmitter output. For each temperature, the carrier frequency was recorded. In addition, the carrier frequency was recorded when the power was set to 13.8 V DC (115% of 12V DC) and to 10.2 V DC (85% of 12V DC).

4.2.3 Test Results 15.225 (e)

Nominal Frequency: 13560000 Hz

Stealth Bio 900W2030				
Voltage (DC)	**Temperature (C)**	**Measured Frequency (Hz)**	**Deviation from Reference (Hz)**	**Deviation (%)**
12.0	-20	13560405	84	0.000619
12.0	-10	13560401	80	0.000590
12.0	0	13560398	77	0.000568
12.0	10	13560360	39	0.000288
12.0	20	13560321	0	0.000000
12.0	30	13560328	7	0.000052
12.0	40	13560329	8	0.000059
12.0	50	13560297	24	0.000177
10.2	20	13560321	0	0.000000
13.8	20	13560321	0	0.000000

Nominal Frequency @ 20C, 12VDC: 13560321 Hz

Stealth Dual 900W2036				
Voltage (DC)	**Temperature (C)**	**Measured Frequency (Hz)**	**Deviation from Reference (Hz)**	**Deviation (%)**
12.0	-20	13560394	25	0.000184
12.0	-10	13560392	23	0.000170
12.0	0	13560386	17	0.000125
12.0	10	13560371	2	0.000015
12.0	20	13560369	0	0.000000
12.0	30	13560361	8	0.000059
12.0	40	13560355	14	0.000103
12.0	50	13560342	27	0.000199
10.2	20	13560369	0	0.000000
13.8	20	13560369	0	0.000000

Nominal Frequency @ 20C, 12VDC: 13560369 Hz

4.3 Occupied Bandwidth
FCC 15.215

4.3.1 Requirements

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage.

4.3.2 Procedure

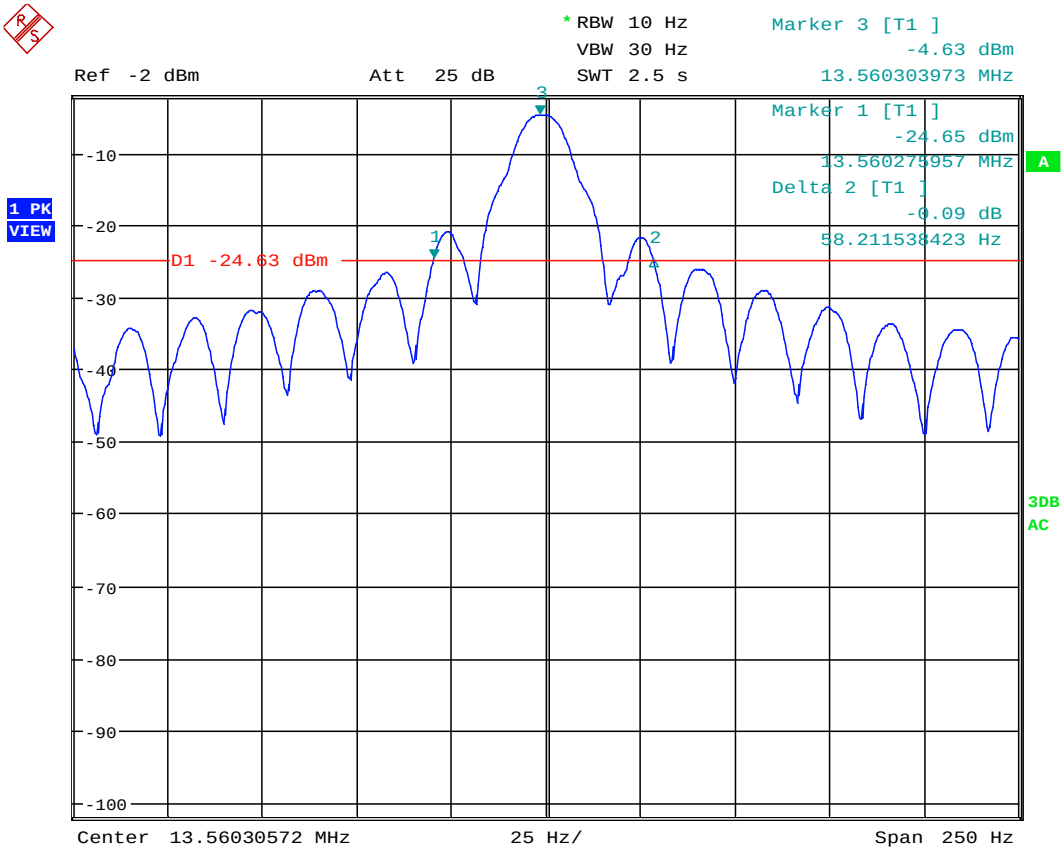
The EUT was setup to transmit in normal operating condition.

Measurements were made with the loop antenna in close proximity of the EUT. Following the procedures of ANSI 63.10, the 20dB bandwidth measurements were taken. The following plots show Occupied Bandwidth.

4.3.3 Test Results

EUT	Frequency (MHz)	20-dB Channel Bandwidth (Hz)	Plot
Stealth Bio 900W2030	13.56	58.2	1
Stealth Dual 900W2036	13.56	55.1	2

Plot 1



20dB Bandwidth

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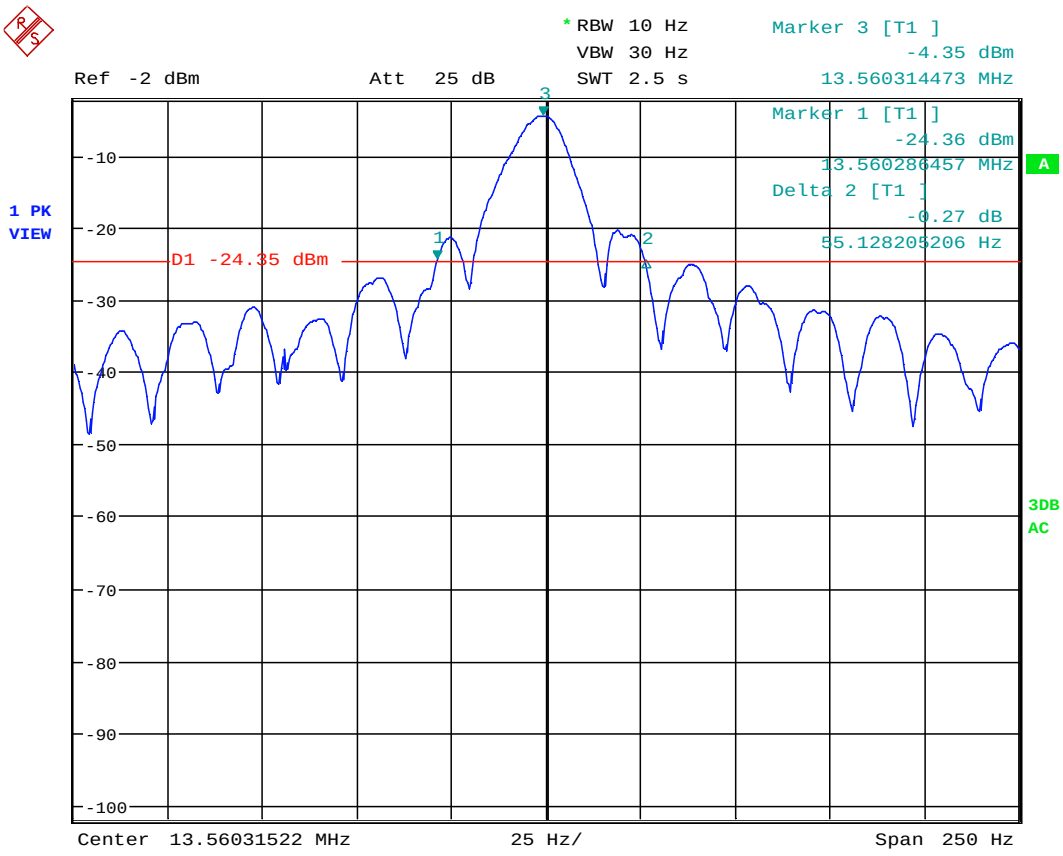
Plot 2



20dB Bandwidth

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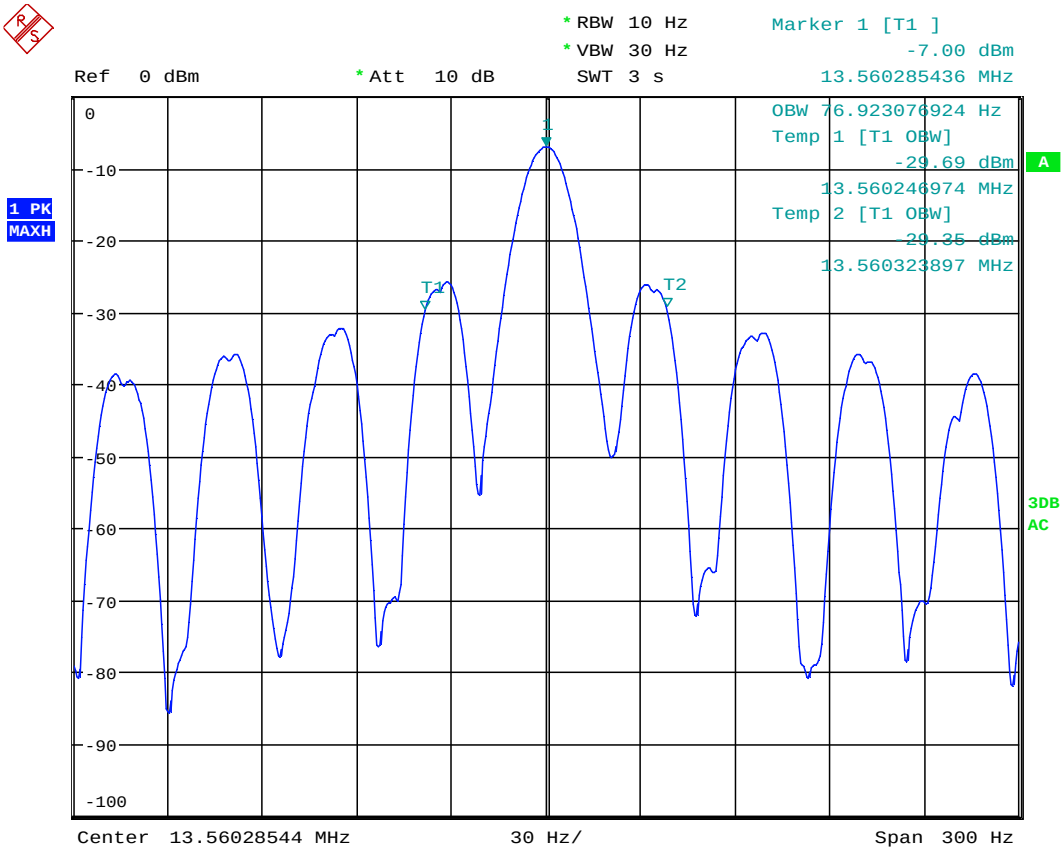
EUT	Frequency (MHz)	99% Channel Bandwidth (Hz)	Plot
Stealth Bio 900W2030	13.56	76.92	3
Stealth Dual 900W2036	13.56	78.85	4

Plot 3



99% Bandwidth

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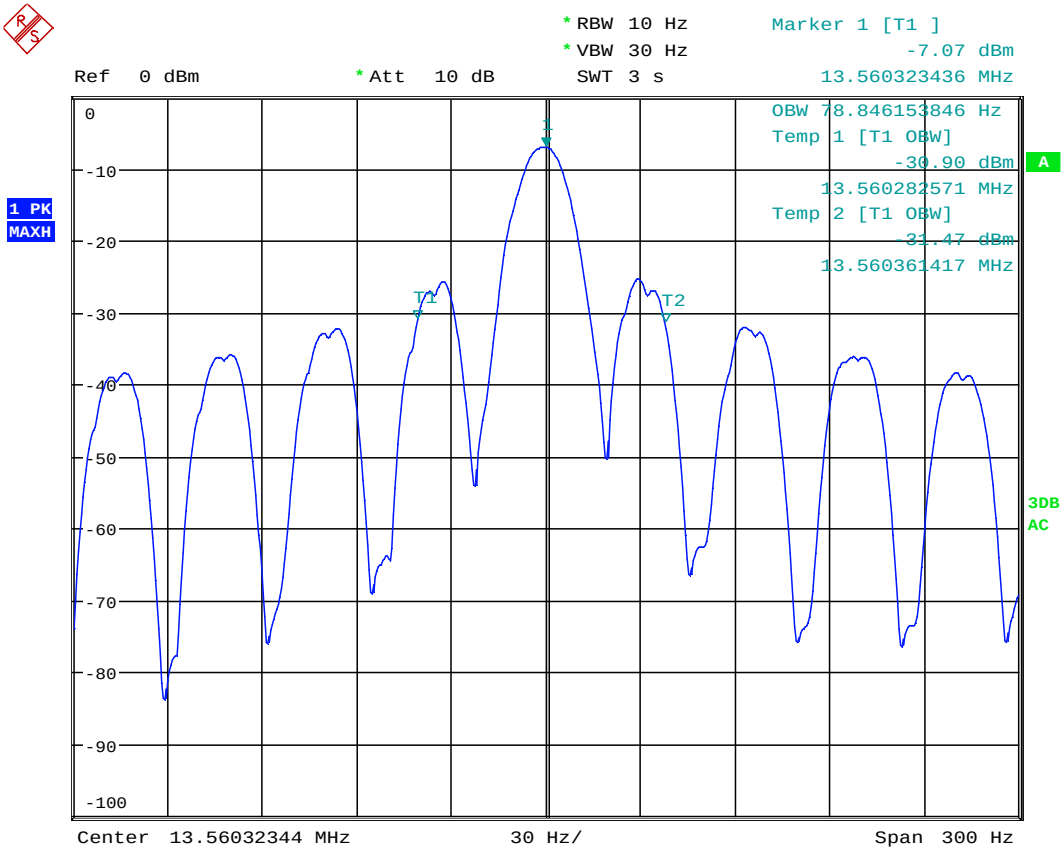
Plot 4



99% Bandwidth

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4.4 AC Line Conducted Emission
FCC Rule 15.207, FCC 15107

4.4.1 Requirement

Frequency Band MHz	Class B Limit dB(µV)		Class A Limit dB(µV)	
	Quasi-Peak	Average	Quasi-Peak	Average
0.15-0.50	66 to 56 *	56 to 46 *	79	66
0.50-5.00	56	46	73	60
5.00-30.00	60	50	73	60

*Note: *Decreases linearly with the logarithm of the frequency*
At the transition frequency the lower limit applies.

4.4.2 Procedure

Measurements are carried out using quasi-peak and average detector receivers in accordance with CISPR 16. An AMN is required to provide a defined impedance at high frequencies across the power feed at the point of measurement of terminal voltage and also to provide isolation of the circuit under test from the ambient noise on the power lines. An AMN as defined in CISPR 16 shall be used.

The EUT is located so that the distance between the boundary of the EUT and the closest surface of the AMN is 0.8m.

Where a flexible mains cord is provided by the manufacturer, this shall be 1m long or if in excess of 1m, the excess cable is folded back and forth as far as possible so as to form a bundle not exceeding 0.4m in length.

The EUT is arranged and connected with cables terminated in accordance with the product specification.

Conducted disturbance is measured between the phase lead and the reference ground, and between the neutral lead and the reference ground. Both measured values are reported.

The EUT, where intended for tabletop use, is placed on a table whose top is 0.8m above the ground plane. A vertical, metal reference plane is placed 0.4m from the EUT. The vertical metal reference-plane is at least 2m by 2m. The EUT shall be kept at least 0.8m from any other metal surface or other ground plane not being part of the EUT. The table is constructed of non-conductive materials. Its dimensions are 1m by 1.5m, but may be extended for larger EUT.

Floor standing EUT are placed on a horizontal metal ground plane and isolated from the ground plane by resting on an insulating material. The metal ground plane extends at least 0.5m beyond the boundaries of the EUT and has minimum dimensions of 2m by 2m.

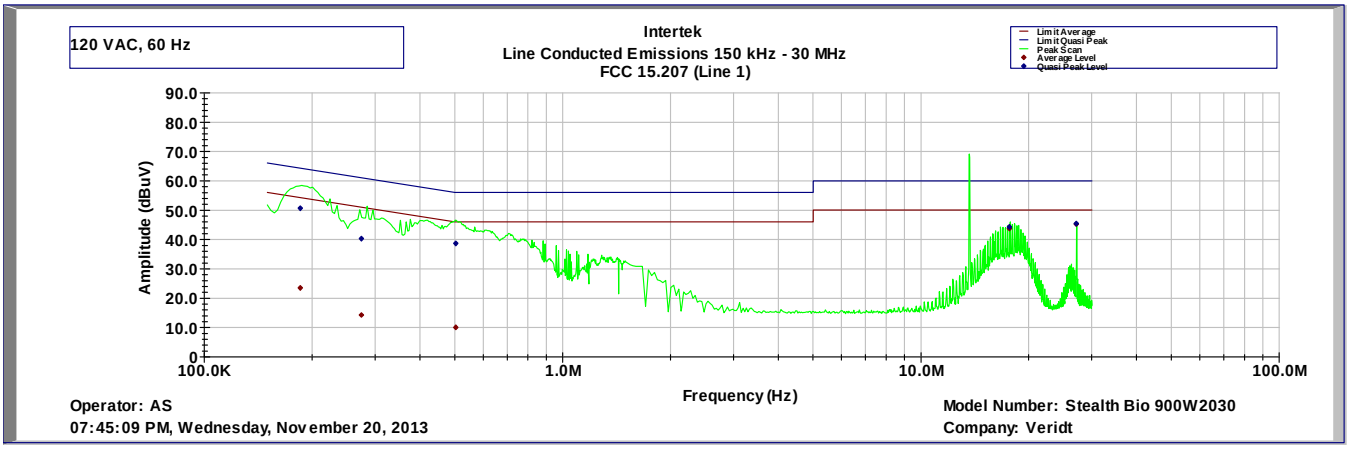
EUT was placed in transmission mode then tested for conducted emissions per 15.207 to ensure the device complies with 15.207 outside the transmitter fundamental emissions band. After, the EUT antenna is removed from the EUT and only the fundamental emission band was measured to show that the fundamental emission band is in compliance with the 15.207 limits.

Equipment setup for conducted disturbance tests followed.

4.4.3 Test Result

AC Line Conducted Emission on Model Number: Stealth Bio 900W2030

120VAC 60 Hz – Line 1

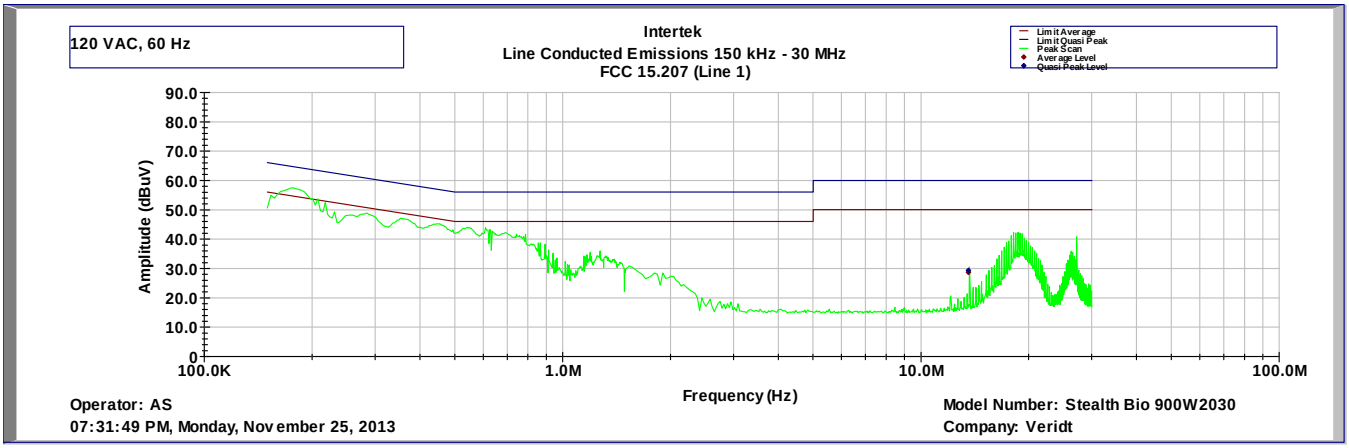


Line Conducted Emissions 150 kHz - 30 MHz FCC 15.207, FCC 15107

Company: Veridt, Inc. Model Number: Stealth Bio 900W2030

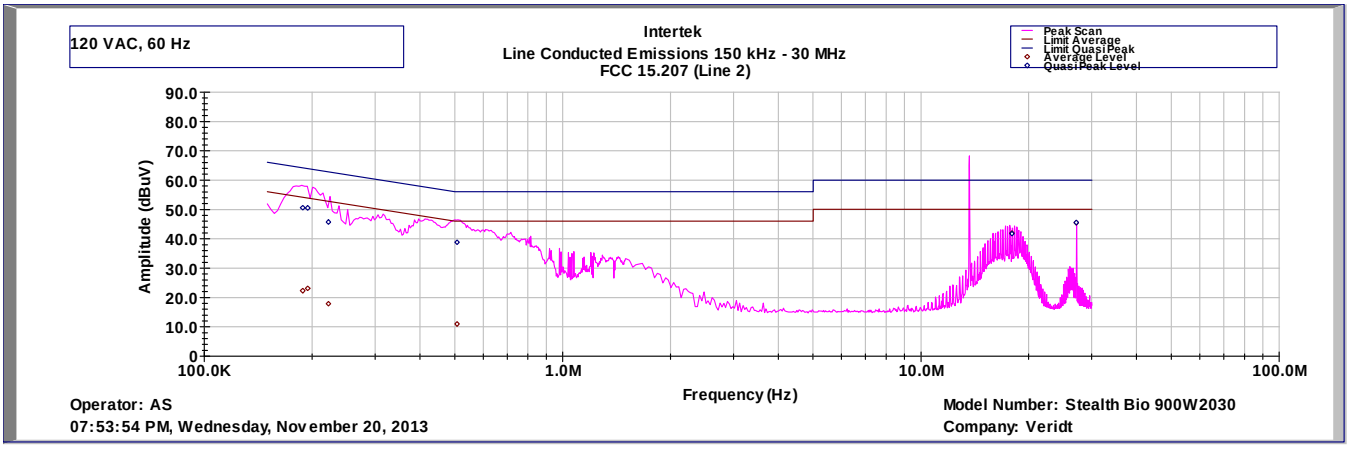
Frequency	Line	Av Level	QP Level	Av Limit	QP Limit	Av Margin	QP Margin
MHz		dBuV	dBuV	dBuV	dBuV	dB	dB
0.185	Line 1	23.5	50.6	55	65	-31.5	-14.4
0.274	Line 1	14.3	40.3	52.4	62.4	-38.2	-22.2
0.503	Line 1	10.0	38.7	46	56	-36.0	-17.3
17.65	Line 1	43.7	44.3	50	60	-6.3	-15.7
27.12	Line 1	45.2	45.4	50	60	-4.8	-14.6

Test with Antenna removed



AC Line Conducted Emission on Model Number: Stealth Bio 900W2030

120VAC 60 Hz – Line 2



Line Conducted Emissions 150 kHz - 30 MHz

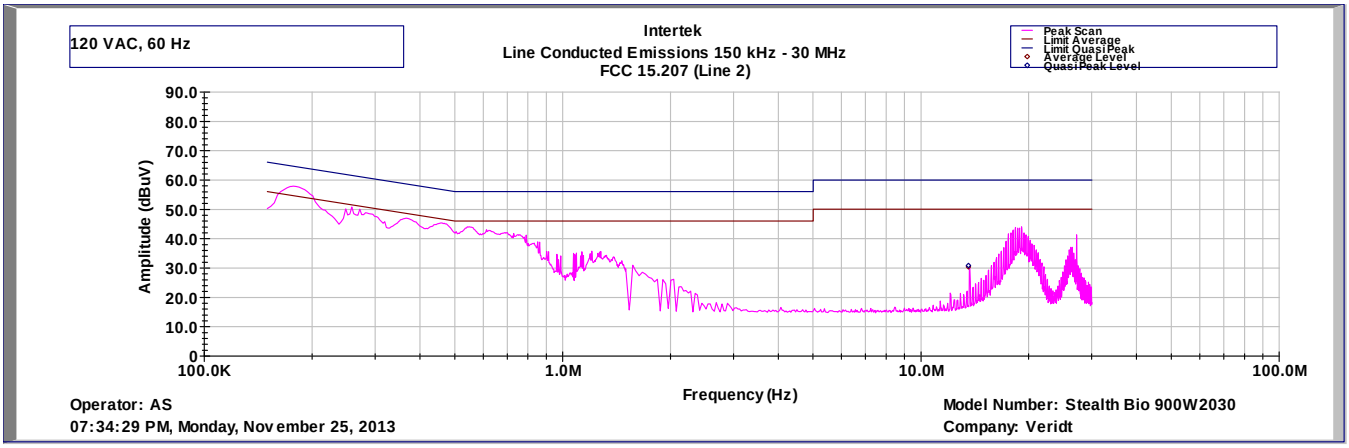
FCC 15.207, FCC 15107

Company: Veridt, Inc.

Model Number: Stealth Bio 900W2030

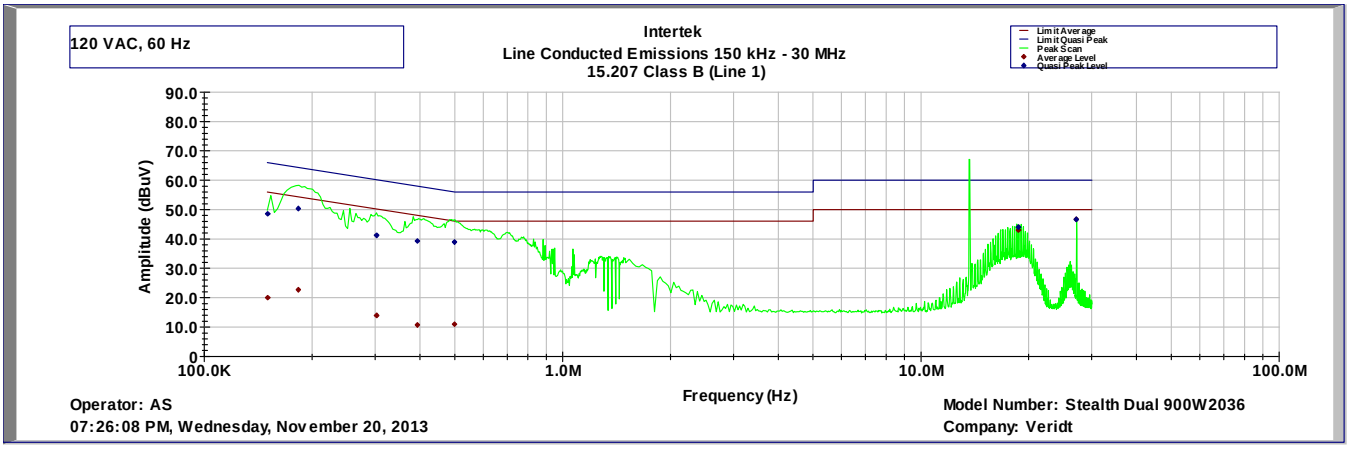
Frequency	Line	Av Level	QP Level	Av Limit	QP Limit	Av Margin	QP Margin
MHz		dBuV	dBuV	dBuV	dBuV	dB	dB
0.188	Line 2	22.3	50.5	54.9	64.9	-32.6	-14.4
0.194	Line 2	23.1	50.5	54.7	64.7	-31.6	-14.2
0.222	Line 2	17.9	45.7	53.9	63.9	-36.1	-18.2
0.507	Line 2	10.9	38.8	46	56	-35.1	-17.2
17.93	Line 2	41.9	41.7	50	60	-8.1	-18.3
27.12	Line 2	45.5	45.5	50	60	-4.5	-14.5

Test with Antenna removed



AC Line Conducted Emission on Model Number: Stealth Dual 900W2036

120VAC 60 Hz – Line 1

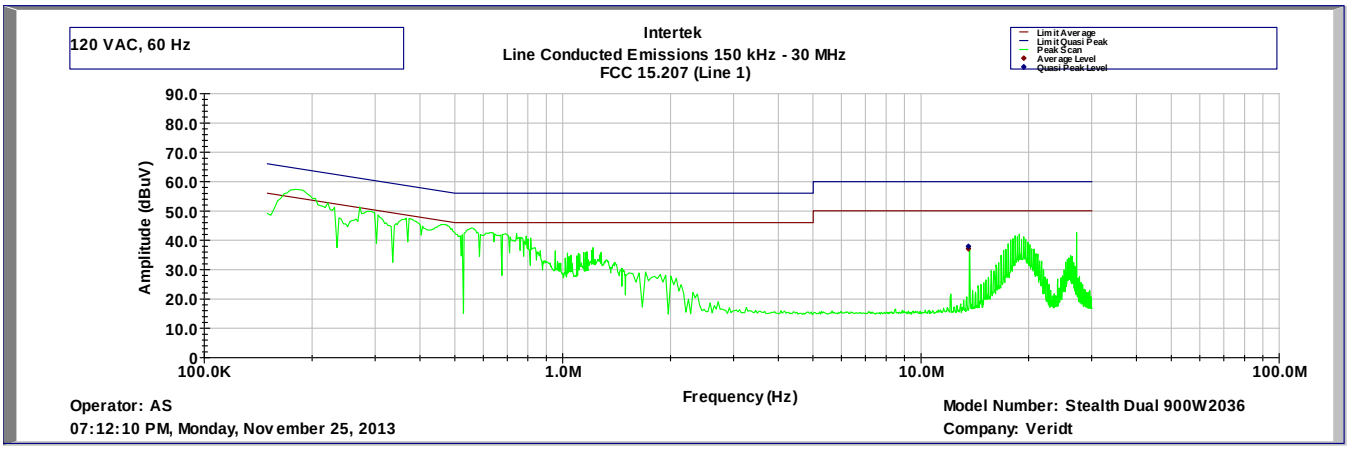


Line Conducted Emissions 150 kHz - 30 MHz FCC 15.207, FCC 15107

Company: Veridt, Inc. Model Number: Stealth Dual 900W2036

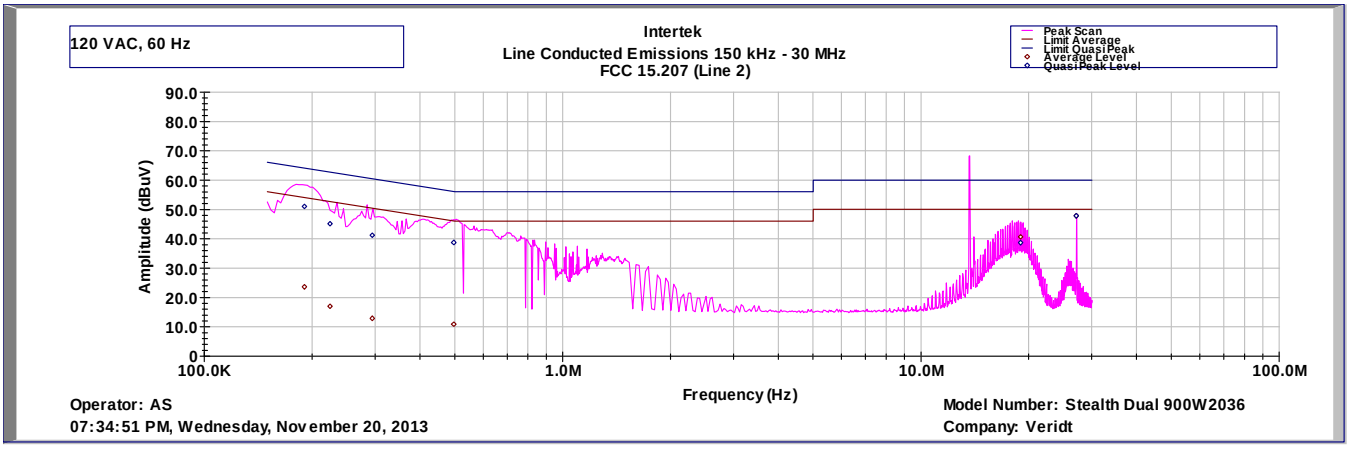
Frequency	Line	Av Level	QP Level	Av Limit	QP Limit	Av Margin	QP Margin
MHz		dBuV	dBuV	dBuV	dBuV	dB	dB
0.150	Line 1	20.0	48.6	56	66	-36.0	-17.4
0.183	Line 1	22.7	50.4	55.1	65.1	-32.4	-14.7
0.302	Line 1	13.9	41.2	51.6	61.6	-37.7	-20.4
0.393	Line 1	10.7	39.3	49.1	59.1	-38.4	-19.8
0.499	Line 1	10.9	38.9	46	56	-35.1	-17.1
18.71	Line 1	43.0	44.0	50	60	-7.0	-16.0
27.12	Line 1	46.7	46.6	50	60	-3.3	-13.4

Test with Antenna removed



AC Line Conducted Emission on Model Number: Stealth Dual 900W2036

120VAC 60 Hz – Line 2



Line Conducted Emissions 150 kHz - 30 MHz

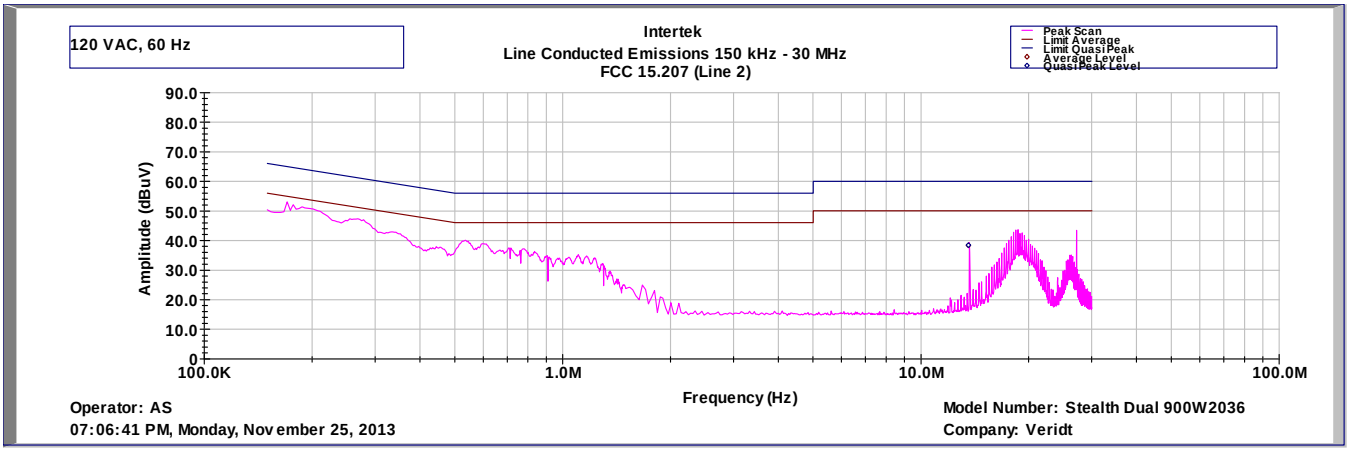
FCC 15.207, FCC 15107

Company: Veridt, Inc.

Model Number: Stealth Dual 900W2036

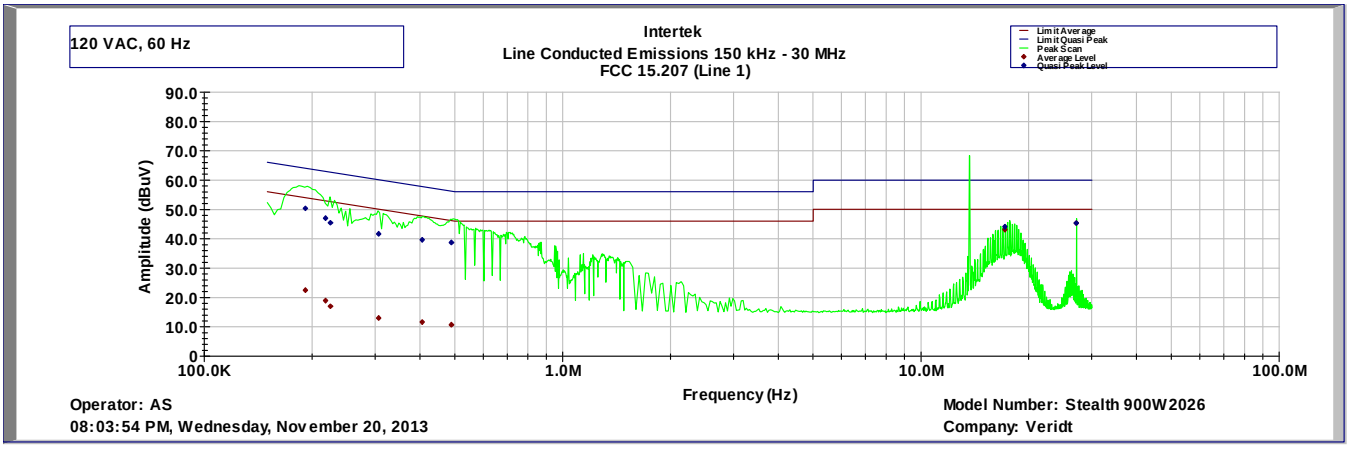
Frequency	Line	Av Level	QP Level	Av Limit	QP Limit	Av Margin	QP Margin
MHz		dBuV	dBuV	dBuV	dBuV	dB	dB
0.190	Line 2	23.6	51.0	54.8	64.8	-31.2	-13.8
0.224	Line 2	17.0	45.1	53.9	63.9	-36.9	-18.8
0.294	Line 2	12.9	41.2	51.9	61.9	-39.0	-20.7
0.497	Line 2	10.9	38.7	46.1	56.1	-35.2	-17.4
18.92	Line 2	40.6	38.7	50	60	-9.4	-21.3
27.12	Line 2	47.8	47.8	50	60	-2.2	-12.2

Test with Antenna removed



AC Line Conducted Emission on Model Number: Stealth 900W2026

120VAC 60 Hz – Line 1



Line Conducted Emissions 150 kHz - 30 MHz

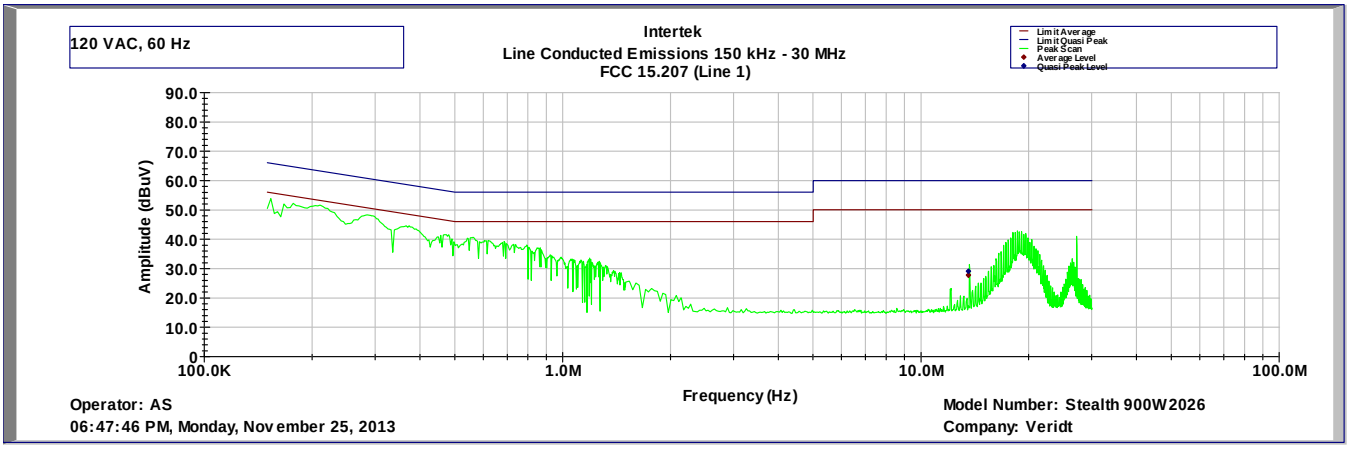
FCC 15.207, FCC 15107

Company: Veridt, Inc.

Model Number: Stealth 900W2026

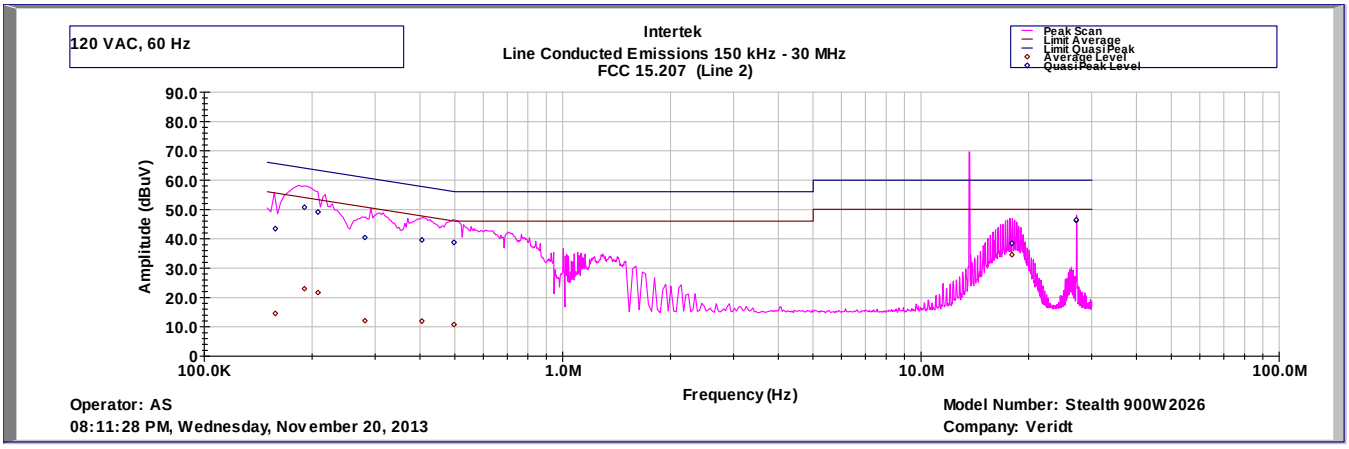
Frequency	Line	Av Level	QP Level	Av Limit	QP Limit	Av Margin	QP Margin
MHz		dBuV	dBuV	dBuV	dBuV	dB	dB
0.191	Line 1	22.5	50.4	54.8	64.8	-32.4	-14.5
0.218	Line 1	18.9	47	54.1	64.1	-35.2	-17.1
0.225	Line 1	17.0	45.4	53.9	63.9	-36.9	-18.4
0.307	Line 1	13.0	41.7	51.5	61.5	-38.5	-19.8
0.405	Line 1	11.6	39.6	48.7	58.7	-37.1	-19.1
0.489	Line 1	10.7	38.7	46.3	56.3	-35.6	-17.6
17.15	Line 1	43.1	44.1	50	60	-6.9	-15.9
27.12	Line 1	45.3	45.3	50	60	-4.7	-14.7

Test with Antenna removed



AC Line Conducted Emission on Model Number: Stealth 900W2026

120VAC 60 Hz – Line 2

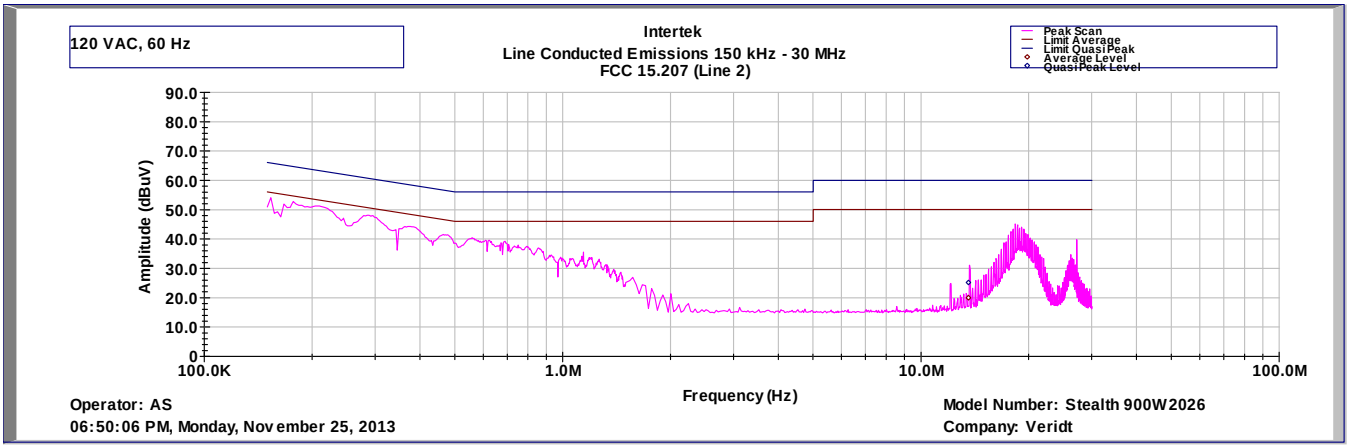


Line Conducted Emissions 150 kHz - 30 MHz FCC 15.207, FCC 15107

Company: Veridt, Inc. Model Number: Stealth 900W2026

Frequency	Line	Av Level	QP Level	Av Limit	QP Limit	Av Margin	QP Margin
MHz		dBuV	dBuV	dBuV	dBuV	dB	dB
0.158	Line 2	14.5	43.4	55.8	65.8	-41.3	-22.3
0.190	Line 2	23.0	50.7	54.9	64.9	-31.9	-14.1
0.208	Line 2	21.7	49.1	54.4	64.4	-32.7	-15.2
0.281	Line 2	12.1	40.4	52.3	62.3	-40.2	-21.9
0.404	Line 2	11.9	39.6	48.7	58.7	-36.8	-19.1
0.498	Line 2	10.7	38.8	46.1	56.1	-35.3	-17.3
17.93	Line 2	34.6	38.5	50	60	-15.4	-21.5
27.12	Line 2	46.2	46.5	50	60	-3.8	-13.5

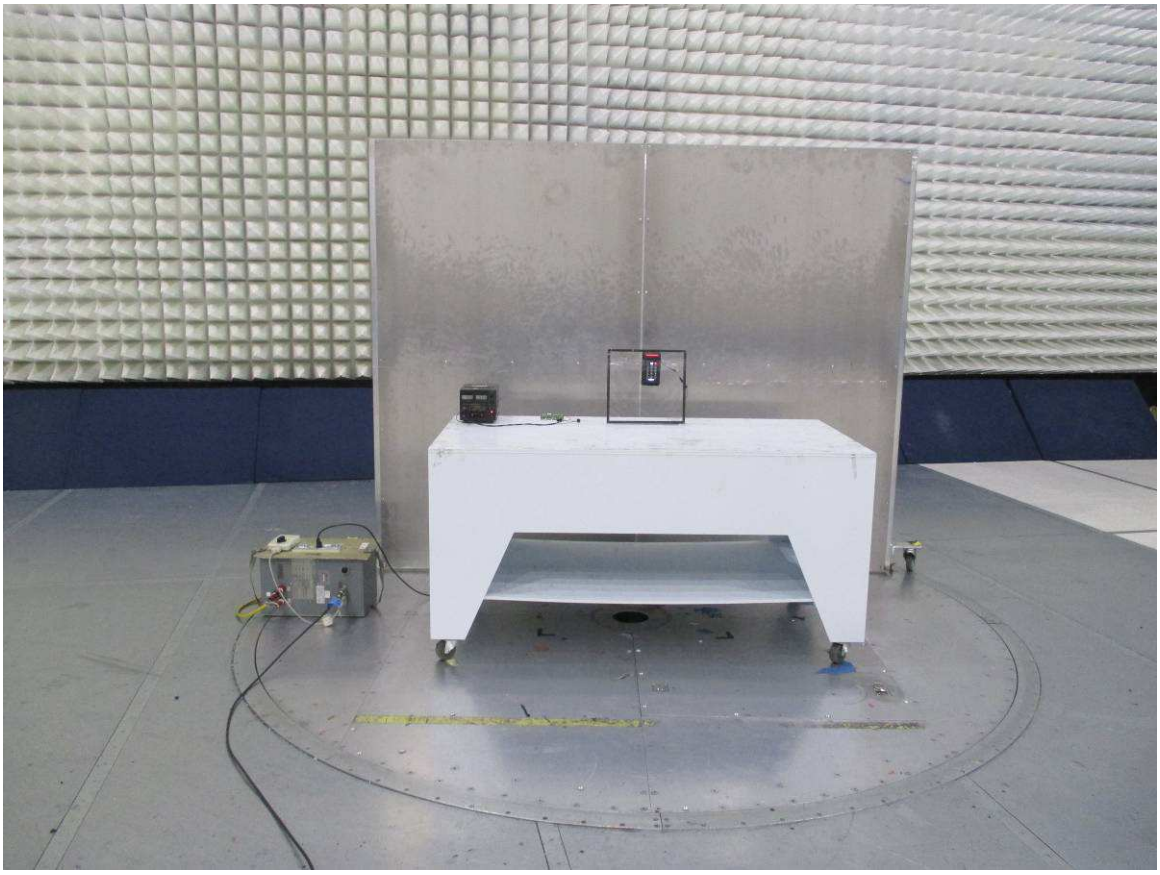
Test with Antenna removed



Result: **Complies** by 2.2dB

4.4.4 Test Configuration Photographs

The following photographs show the testing configurations used.



The following photographs show the testing configurations used.

4.5 Radiated Emissions on Digital Parts and Receiver
FCC Ref: 15.109, ICES 003, RSS Gen

4.5.1 Test Limit

Limits for Electromagnetic Radiated Emissions FCC Section 15.109(b), ICES 003*, RSS GEN

Frequency (MHz)	**Class A at 10m dB(µV/m)**	**Class B at 3m dB(µV/m)**
30-88	39	40.0
88-216	43.5	43.5
216-960	46.4	46.0
Above 960	49.5	54.0

* According to FCC Part 15.109(g) an alternative to the radiated emission limits shown above, digital devices may be shown to comply with the limit of CISPR Pub. 22

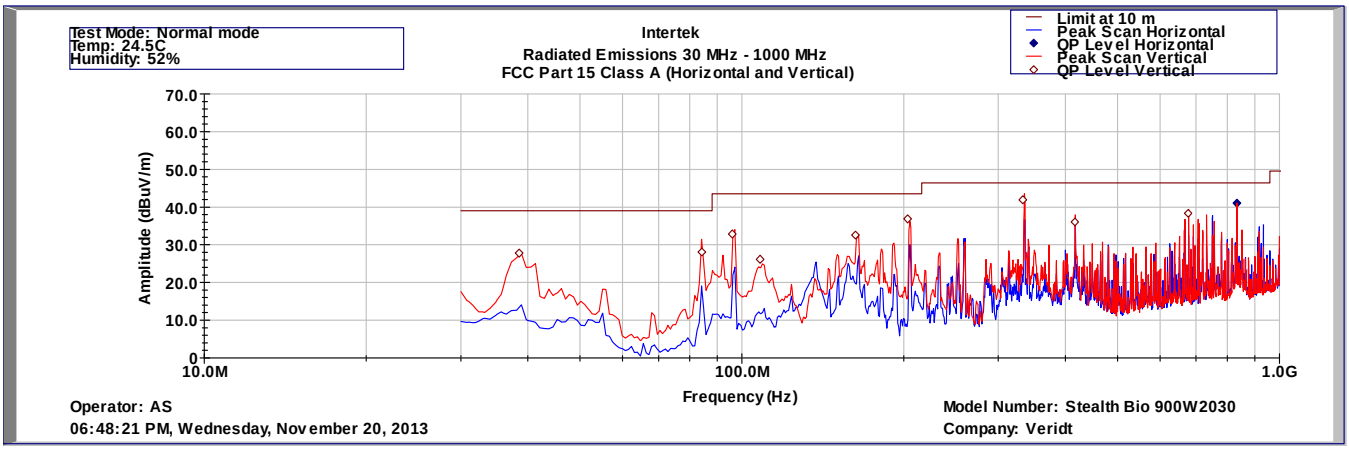
4.5.2 Procedures

The EUT was set for receive mode only. Radiated measurements were taken. 120 kHz resolution bandwidth was used from 30 MHz - 1 GHz. 1 MHz resolution bandwidth was used for measurements done above 1 GHz. All plots are corrected for cable loss, antenna factor, and preamp.

4.5.3 Test Results

Radiated emission measurements were performed from 30 MHz to 1000 MHz. The data on the following pages list the significant emission frequencies, the limit and the margin of compliance.

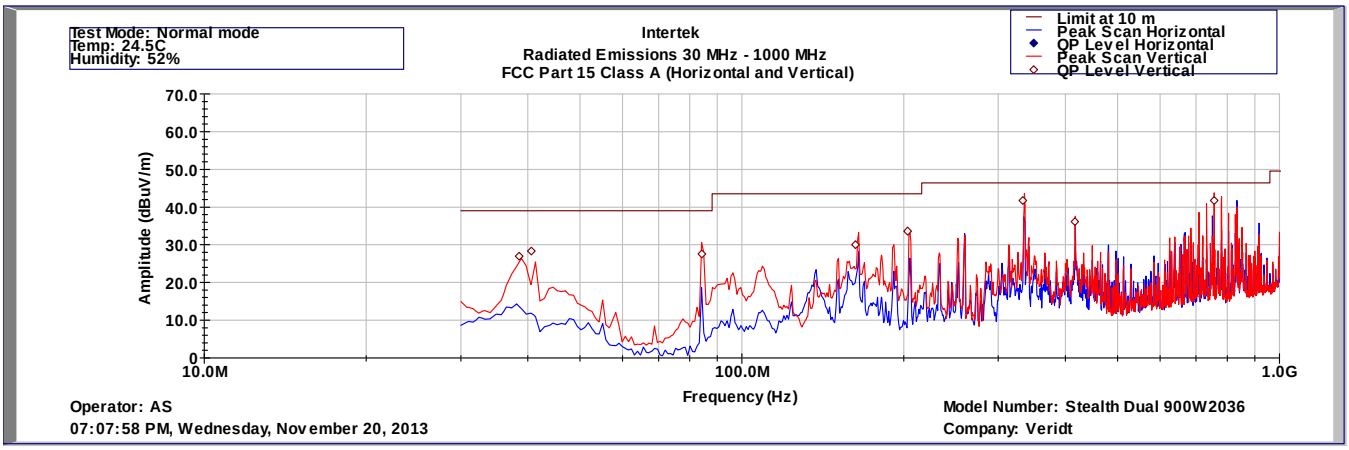
Test Results: Radiated Emissions 30 MHz - 1000 MHz on Model Number: Stealth Bio 900W2030



Intertek Testing Services
Radiated Emissions 30 MHz - 1000 MHz
FCC Part 15 Class A (15.109)
Company: Veridt, Inc. Model Number: Stealth Bio 900W2030

Frequency	Polarity	Quasi Pk FS	Limit@10m	Margin	RA	CF	AG	AF
Hz	H/V	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB(1/m)
38.5	V	27.8	39	-11.2	42.4	0.4	32	17
84.3	V	28	39	-11	52.1	0.5	32	7.4
96.0	V	32.8	43.5	-10.7	54.8	0.5	32	9.5
108.1	V	26.1	43.5	-17.4	47.1	0.6	32	10.4
162.8	V	32.5	43.5	-11	55.1	0.8	32	8.6
203.4	V	36.8	43.5	-6.7	57.9	0.8	31.9	10
333.3	V	41.9	46.4	-4.5	58.9	1.1	32	13.9
416.5	V	36	46.4	-10.4	50.5	1.1	32	16.4
676.6	V	38.3	46.4	-8.1	49.8	1.5	32.3	19.3
833.3	H	41	46.4	-5.4	50.4	1.7	31.9	20.8

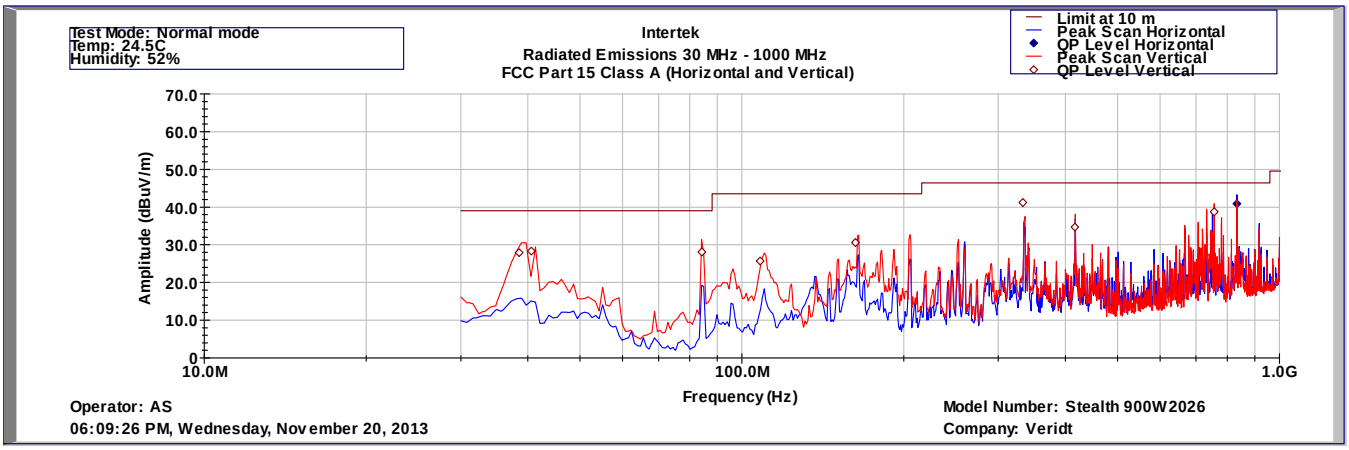
Test Results: Radiated Emissions 30 MHz - 1000 MHz on Model Number: Stealth Dual 900W2036



Intertek Testing Services
Radiated Emissions 30 MHz - 1000 MHz
FCC Part 15 Class A (15.109)
Company: Veridt, Inc. Model Number: Stealth Dual 900W2036

Frequency	Polarity	Quasi Pk FS	Limit@10m	Margin	RA	CF	AG	AF
Hz	H/V	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB(1/m)
38.5	V	27	39	-12	41.6	0.4	32	17
40.6	V	28.3	39	-10.7	43.2	0.3	32	16.8
84.3	V	27.5	39	-11.5	51.6	0.5	32	7.4
162.8	V	30	43.5	-13.5	52.6	0.8	32	8.6
203.3	V	33.6	43.5	-9.9	54.7	0.8	31.9	10
333.3	V	41.7	46.4	-4.7	58.7	1.1	32	13.9
416.5	V	36.1	46.4	-10.3	50.6	1.1	32	16.4
756.2	V	41.7	46.4	-4.7	52.1	1.6	32.2	20.2

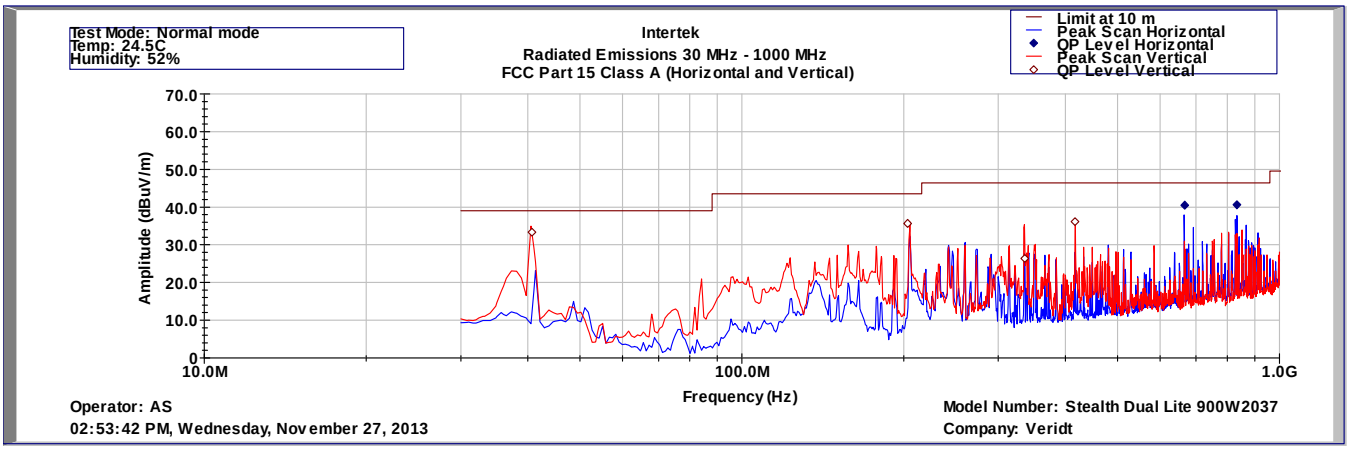
Test Results: Radiated Emissions 30 MHz - 1000 MHz on Model Number: Stealth 900W2026



Intertek Testing Services
Radiated Emissions 30 MHz - 1000 MHz
FCC Part 15 Class A (15.109)
Company: Veridt, Inc. Model Number: Stealth 900W2026

Frequency	Polarity	Quasi Pk FS	Limit@10m	Margin	RA	CF	AG	AF
Hz	H/V	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB(1/m)
38.5	V	27.9	39	-11.1	42.5	0.4	32	17
40.6	V	28.3	39	-10.7	43.2	0.3	32	16.8
84.3	V	28.1	39	-10.9	52.1	0.6	32	7.4
108.1	V	25.7	43.5	-17.8	46.6	0.7	32	10.4
162.75	V	30.6	43.5	-12.9	53.2	0.8	32	8.6
333.3	V	41.2	46.4	-5.2	58.2	1.1	32	13.9
416.5	V	34.7	46.4	-11.7	49.1	1.2	32	16.4
756.2	V	38.7	46.4	-7.7	49.1	1.6	32.2	20.2
833.3	H	40.9	46.4	-5.5	50.3	1.7	31.9	20.8

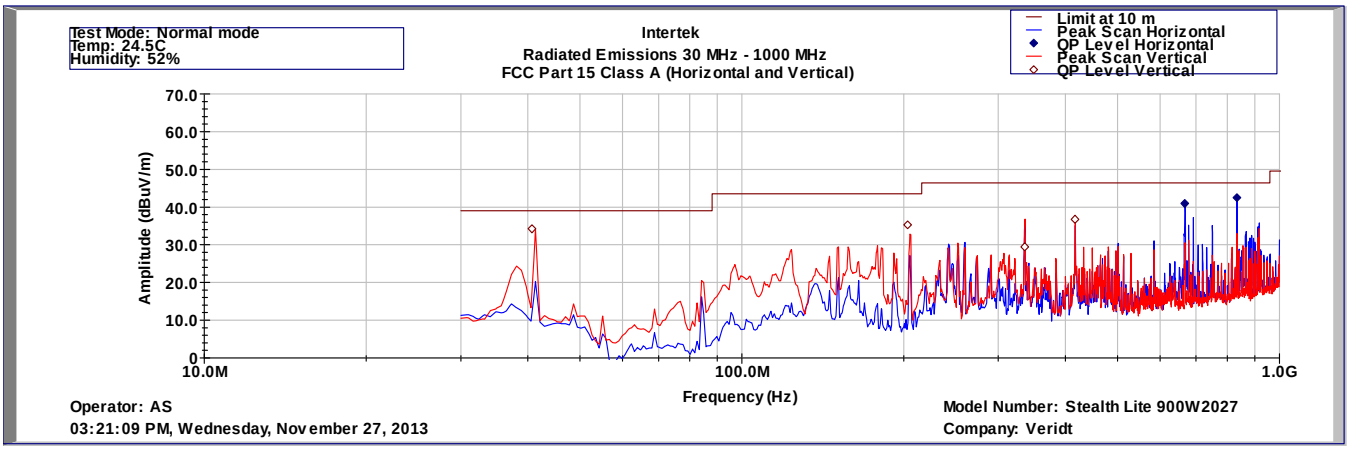
Test Results: Radiated Emissions 30 MHz - 1000 MHz on Model Number: Stealth Dual Lite 900W2037



Intertek Testing Services
Radiated Emissions 30 MHz - 1000 MHz
FCC Part 15 Class A (15.109)
Company: Veridt, Inc. Model Number: Stealth Dual Lite 900W2037

Frequency	Polarity	Quasi Pk FS	Limit@10m	Margin	RA	CF	AG	AF
Hz	H/V	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB(1/m)
40.7	V	33.3	39	-5.7	48.2	0.3	32	16.8
203.4	V	35.6	43.5	-7.9	56.7	0.8	31.9	10
336.0	V	26.3	46.4	-20.1	43.2	1.1	32	14
416.6	V	36.1	46.4	-10.3	50.6	1.1	32	16.4
666.6	H	40.5	46.4	-5.9	52.3	1.5	32.3	19
833.3	H	40.6	46.4	-5.8	50	1.7	31.9	20.8

Test Results: Radiated Emissions 30 MHz - 1000 MHz on Model Number: Stealth Lite 900W2027



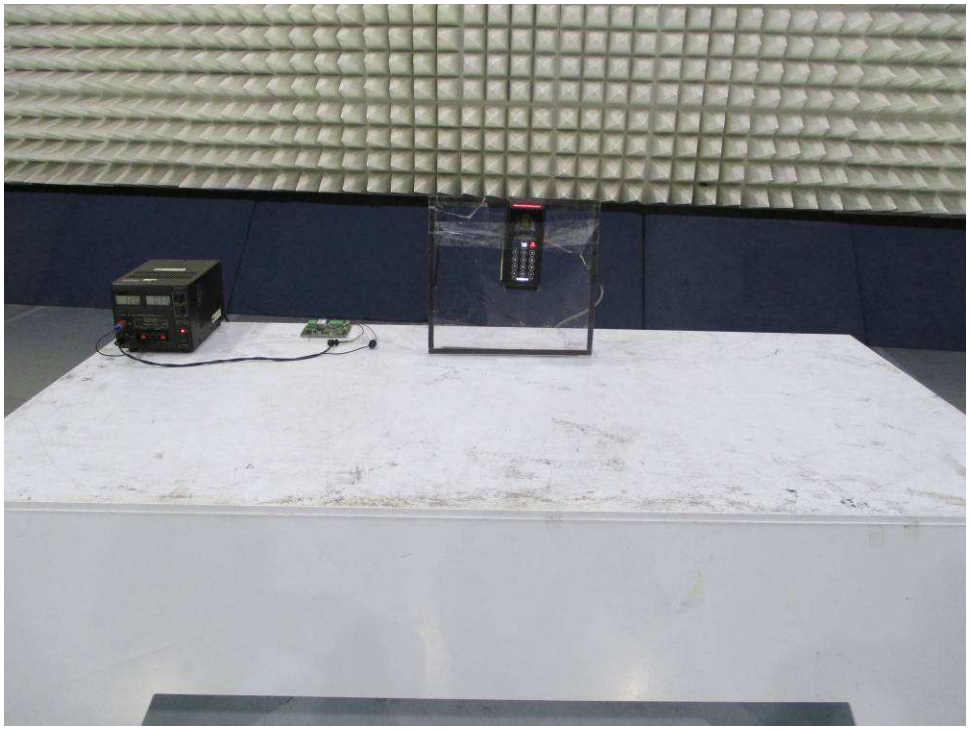
Intertek Testing Services
Radiated Emissions 30 MHz - 1000 MHz
FCC Part 15 Class A (15.109)
Company: Veridt, Inc. Model Number: Stealth Lite 900W2027

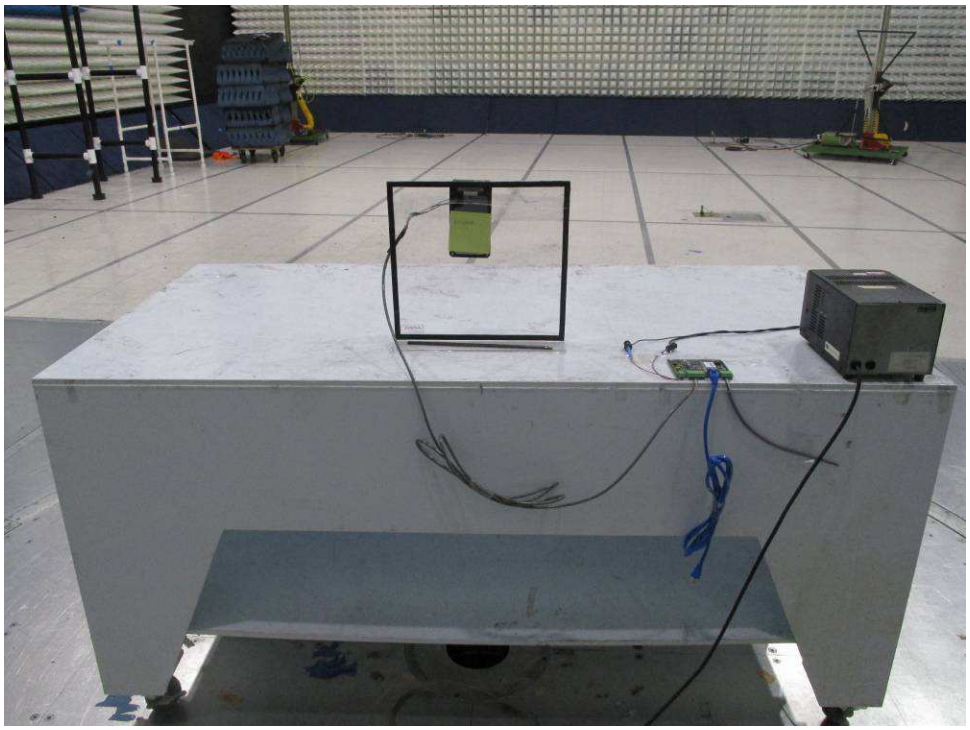
Frequency	Polarity	Quasi Pk FS	Limit@10m	Margin	RA	CF	AG	AF
Hz	H/V	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB(1/m)
40.7	V	34.2	39	-4.8	49.1	0.3	32	16.8
203.4	V	35.3	43.5	-8.2	56.4	0.8	31.9	10
336.0	V	29.4	46.4	-17	46.3	1.1	32	14
416.6	V	36.7	46.4	-9.7	51.2	1.1	32	16.4
666.6	H	40.9	46.4	-5.5	52.7	1.5	32.3	19
833.3	H	42.5	46.4	-3.9	51.9	1.7	31.9	20.8

Result: **Complies** by 3.9dB

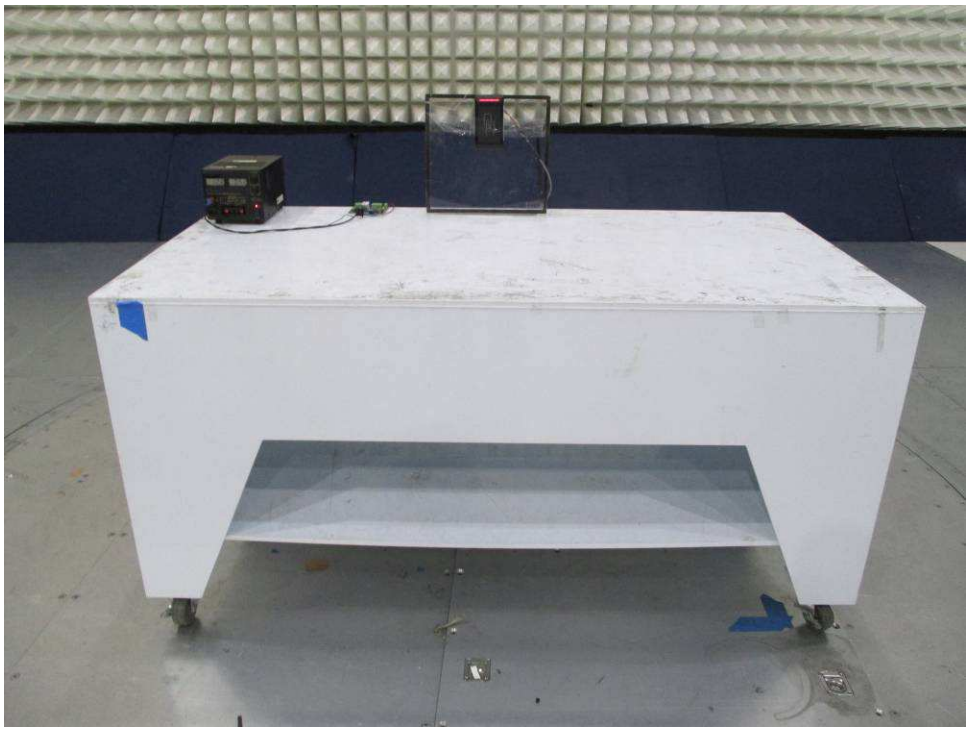
4.5.4 Test Configuration Photographs

The following photographs show the testing configurations used.





4.5.4 Test Configuration Photographs (Continued)



5.0 List of test equipment

Measurement equipment used for emission compliance testing utilized the equipment on the following list:

Equipment	Manufacturer	Model/Type	Serial No.	Calibration Interval	Cal Due
RF Filter Section	Hewlett Packard	85460A	3448A00267	12	03/12/14
EMI Receiver	Hewlett Packard	8546A	3710A00373	12	03/12/14
Bi-Log Antenna	ARA	LPB-2513/A	1154	12	08/01/14
Pre-Amplifier	Sonoma Instrument	310	185634	12	12/12/13
LISN	FCC	FCC-LISN-50-50-M-H	2048	12	02/28/14
EMI Test Receiver 40GHz	Rohde and Schwartz	ESU	100172	12	11/04/14
Universal Power Analyzer	Voltech Instruments	PM6000	100006700037	12	04/09/14
Power Supply	Behlman	N/A	N/A	*	*
Environmental Test Chamber	Thermotron	WS-512-CHM-25-25	939/11463RF	12	11/14/14
Ant-Passive Loop	EMCO	6512	1029	12	07/12/14
Digital Multi Meter	FLUKE	87V	95750070	12	05/09/14
Power Supply	Extech	EP-3003	D30030012	*	*

* Calibration performed by ITS prior to the test. # Calibration not required

6.0 Document History

Revision/ Job Number	Writer Initials	Reviewer Initials	Date	Change
1.0 / 101412796	AS	KK	November 26, 2013	Original document
1.1 / 101412796	AS	KK	December 02, 2013	Added 99% Occupied Bandwidth Plots.